

Application No. 10/724,108
Reply to Office Action of November 15, 2006
and the Advisory Action dated March 29, 2007

REMARKS/ARGUMENTS

Claims 14-25 are active in this case.

Support for the amendments to Claims 14 and 20, i.e., the gene/enzymes listed in the claims are specifically identified in pages 10-21 of the application.

Claim 20 has been amended to clarify that the method transforms a cell in which one or more the genes identified have been deleted or inactivated. Accordingly, the rejection under 35 USC 112, second paragraph is no longer applicable.

The specification is amended to provide a cross-reference to related applications.

No new matter is believed to have been added by the addition of these amendments.

In the Official Action, the Examiner has maintained the written description rejection (35 U.S.C. § 112, first paragraph) because he has taken the position that the specification does not provide adequate description for all of the possible genes encoding pyruvate decarboxylase, aspartic protease, serine protease, aminopeptidase, and carboxypeptidase as defined in the claims. This rejection is believed to be no longer applicable as the claims have been amended to can define the genes listed in the Examples on Pages 10-21, i.e., dipeptidyl aminopeptidase, cytoplasmic aminopeptidase, aspartic protease, pyruvate decarboxylase pdc1, serine protease isp 6, aminopeptidase, carboxypeptidase, carboxypeptidase, vacuolar carboxylase S, zinc protease, zinc protease, metalloprotease, zinc metalloprotease, CAAX prenyl protease I, dipeptidyl peptidase, dipeptidase, methionine metallopeptidase, methionine aminopeptidase, signal peptidase, and mitochondrial peptidase β subunit.

These genes are known in the art as evidenced by the references for the genes in the Examples (“SPC,” “SPAC” etc) as open reading frames from the genome sequence of

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Schizosaccharomyces pombe reported in the journal *Nature* 415 (6874), 871-880 (2002),
copy attached (see also page 12, lines 8-9).

The fact that these genes with known structures were known, the specification and claims satisfy the written description requirement (see *Capon v. Eshhar* (Fed. Cir. 2005): “When the prior art includes the nucleotide information, precedent does not set a *per se* rule that the information must be determined afresh.”; see also *Falkner v. Inglis*, 79 USPQ2d 1001 (Fed. Cir. 2006): “Recitation of Known Structure Is Not Required” to satisfy written description requirement).

Withdrawal of this rejection is requested.

The Examiner has maintained that the YAP3 protease described in Egel-Matani is an “aspartic protease” and therefore, meets the definition of the claims notwithstanding the discussion in col. 2, lines 18-19 in which the enzyme is characterized as cleaving arginine. However, it would appear that while Egel-Matani describes a *S. cerevisiae* YAP3, there is no disclosure for *S. pombe* YAP3-type proteases and certainly not the specific aspartic protease SPCC1795.09 as described in the specification on page 16, line 1 and listed in the claims. Accordingly, withdrawal of this rejection is requested.

Regarding the rejection based on Simeon, the publication does appear to describe a CPY serine protease and notwithstanding our view of the data Simeon presents, the Examiner has taken the position that the *S. pombe* strain inherently over-expresses the *S. cerevisiae* CPY introduced therein. However, what Simeon does not describe is the specific serine protease isp6 (SPAC1F8.07) has a distinct structure (i.e., sequence). In this regard, Applicants attach the sequences of *Schizosaccharomyces pombe* cpy1 gene for

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carboxypeptidase Y (PubMed accession No. D86560) used in Simeon and the serine protease isp6 referenced on page 10, line 16 and listed in the pending claims (i.e.,SPAC4A.04).

The Examiner has also rejected Claims 14, 18, 20 and 24 as being obvious in view of WO 00/42203 in view of Giga-Hama et al. The rejection is based on the allegation that one would have applied the techniques described in WO 00/42203 to the *S. pombe* cells in Giga-Hama. This rejection is no longer applicable in light of the amended claims submitted herein, and particularly, because these two publications do not describe or suggest the specific genes/enzymes defined in Claims 14 and 20.

Withdrawal of the rejection is requested.

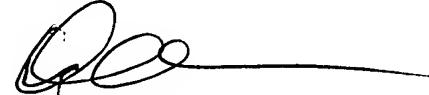
As for the required substitute Application Data Sheet, this was to correct Mr. Tohda's name and another mark-up is attached.

A Notice of Allowance for all pending claims is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, he is encouraged to contact Applicants' undersigned representative.

Respectfully submitted,

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